STATE OF INDIANA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

AMENDED AUTHORIZATION TO DISCHARGE UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), Title 13 of the Indiana Code, and regulations adopted by the Water Pollution Control Board, the Indiana Department of Environmental Management (IDEM) is issuing this permit to the

CITY OF ANGOLA

hereinafter referred to as "the permittee." The permittee owns and/or operates the **City of Angola Wastewater Treatment Plant,** a major municipal wastewater treatment plant located at 1095 Redding Road, Angola, Indiana, Steuben County. The permittee is hereby authorized to discharge from the outfalls identified in Part I of this permit to receiving waters named H. D. Wood Ditch to Mud Creek to Pigeon Creek in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in the permit. The permittee is also authorized to discharge from combined sewer overflow outfalls listed in Attachment A of this permit, to receiving waters named H. D. Wood Ditch in accordance with the effluent limitations, monitoring requirements, and other conditions set forth in this permit. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

The permit, as issued on August 25, 2009 is hereby amended as contained herein. The amended provisions shall become effective _____. All terms and conditions of the permit not modified at this time remain in effect. Further, any existing condition or term affected by the modifications will remain in effect until the modified provisions become effective.

This permit and authorization to discharge, as amended, shall expire at midnight, October 31, 2014. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration.

Issued on _____ for the Indiana Department of Environmental Management.

_____
Paul Higginbotham, Chief
Permits Branch
Office of Water Quality

(5) which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.

b. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

3. Additional Discharge Limitations and Monitoring Requirements

a. Beginning on the effective date of the permit, the effluent from Outfall 001 shall be limited and monitored by the permittee as follows:

TABLE 4

	Quantity or Loading			**Quality or Concentration**			**Monitoring Requirements**	
Parameter	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Cadmium [1]	-----	Report	lbs/day	-----	Report	mg/l	Quarterly	24 Hr. Comp.
Copper [1]	-----	Report	lbs/day	-----	Report	mg/l	Quarterly	24 Hr. Comp.
Cyanide [1]	-----	Report	lbs/day	-----	Report	mg/l	Quarterly	See [2] Below
Lead [1]	-----	Report	lbs/day	-----	Report	mg/l	Quarterly	24 Hr. Comp.
Interim Mercury [1][3][4]	-----	Report	lbs/day	-----	Report	ng/l	6 X Annually	Grab
Final Mercury [1][3][4]	0.000018	0.000045	lbs/day	1.3	3.2	ng/l	6 X Annually	Grab
Silver [1]	-----	Report	lbs/day	-----	Report	mg/l	Quarterly	24 Hr. Comp.
Zinc [1]	-----	Report	lbs/day	-----	Report	mg/l	Quarterly	24 Hr. Comp.
Chloride [5]								
WQBELs [6]	3,093	5,362	lbs/day	218	378	mg/l	1 X Weekly	24 Hr. Comp.
Interim Limitations [7]	11,236	15,449	lbs/day	792	1,089	mg/l	1 X Weekly	24 Hr. Comp.
Variance Limitations [8]	10,895	14,981	lbs/day	768	1,056	mg/l	1 X Weekly	24 Hr. Comp.

Note: For measurement frequencies less than once per month, the permittee shall report the result from the monitoring period on the Discharge Monitoring Report (DMR) for the final month of the reporting timeframe, beginning with January of each year. For example, for quarterly monitoring, the permittee may conduct sampling within the month of January, February or March. The result from this reporting timeframe shall be reported on the March DMR, regardless of which of the months within the quarter the sample was taken.

[1] The permittee shall measure and report this parameter as Total Recoverable Metal. Cyanide shall be reported as Free Cyanide or Cyanide Amenable to Chlorination.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are recommended for use in the analysis of the effluent samples. Alternative 40 CFR 136 approved methods may be used provided the LOD is less than the monthly average and/or daily maximum effluent limitations.

The permittee may determine a case-specific method detection level (MDL) using one of the analytical methods specified below, or any other test method which is approved by IDEM prior to use. The MDL shall be derived by the procedure specified for MDLs contained in 40 CFR Part 136,

Appendix B, and the limit of quantitation shall be set equal to 3.18 times the MDL. NOTE: The MDL for purposes of this document, is synonymous with the "limit of detection" or "LOD" as defined in 327 IAC 5-1.5-26: "the minimum concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix".

Parameter	EPA/Standard Method	LOD	LOQ
Cadmium	3113 B	0.1 ug/l	0.32 ug/l
Chloride	4500 Cl-E	1000 ug/l	3200 ug/l
Copper	3113 B	1.0 ug/l	3.2 ug/l
Cyanide, Free	4500 CN-G	5.0 ug/l	16.0 ug/l
Cyanide, Free	1677	0.5 ug/l	1.6 ug/l
Lead	3113 B	1.0 ug/l	3.2 ug/l
Mercury	1631, Revision E	0.2 ng/l	0.5 ng/l
Silver	3113 B	0.2 ug/l	0.64 ug/l
Zinc	200.7, Revision 4.4 or 3120 B	2.0 ug/l	6.4 ug/l

[2] The maximum holding time is 24 hours when sulfide is present. Therefore, initially the CN sample should be a grab sample that is tested with lead acetate paper before pH adjustments in order to determine if sulfide is present. If sulfide is present, it can be removed by the addition of cadmium nitrate powder until a negative spot test is obtained. The sample is filtered and then NaOH is added to pH 12. The sample may then be analyzed within 14 days. Alternatively, if the permittee can demonstrate that the wastewater contains no sulfide, the permittee may collect a composite sample and analyze it within 14 days.

[3] Mercury monitoring shall be conducted six times annually (i.e. every other month) for the term of the permit. Monitoring shall be conducted in the months of February, April, June, August, October, and December of each year. Mercury monitoring and analysis will be performed using EPA Test Method 1631, Revision E. If Method 1631, Revision E is further revised during the term of this permit, the permittee and/or its contract laboratory is required to utilize the most current version of the method immediately after approval by EPA.

The permittee shall measure and report this parameter as <u>total recoverable</u> metal.

[4] Refer to the Schedule of Compliance for Mercury in Part I.D. of the permit.

[5] Refer to the Schedule of Compliance for requirements associated with the Chloride Variance in Part I.E. of the permit.

[6] The permittee applied for a variance from the water quality standard for chloride. IDEM granted the variance in accordance with 327 IAC 5-3-4.1(i). The WQBELs for chloride are included in the permit as part of the variance in accordance with 327 IAC 5-3-4.1(i)(1). Compliance with this permit, however, will be determined by compliance with the interim limitations and variance limitations for chloride as described in footnotes [6] and [7] below.

[7] During the period beginning on the effective date of the permit modification incorporating the chloride variance, and lasting until twenty-four (24) months from the effective date of the permit modification incorporating the chloride variance, permit compliance will be determined by compliance with the monthly average and daily maximum interim limitations for chloride.

[8] During the period beginning twenty-four (24) months from the effective date of the 2011 permit modification, permit compliance will be determined by compliance with the monthly average and daily maximum variance limitations for chloride.

4. Additional Monitoring Requirements

Beginning on the effective date of this permit, the permittee shall conduct the following monitoring activities:

a. Influent Monitoring

The permittee shall monitor the influent to its wastewater treatment facility for the following pollutants. Samples shall be representative of the raw influent in accordance \with 327 IAC 5-2-13(b).

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2. This permit may be modified due to a change in sludge disposal standards pursuant to Section 405(d) of the Clean Water Act, if the standards when promulgated contain different conditions, are otherwise more stringent, or control pollutants not addressed by this permit.

3. This permit may be modified, or, alternately, revoked and reissued, to comply with any applicable effluent limitation or standard issued or approved under section 301(b)(2)(C), (D) and (E), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:

   a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   b. controls any pollutant not limited in the permit.

4. This permit may be modified or, alternatively, revoked and reissued after public notice and opportunity for hearing to incorporate monitoring requirements and effluent limitations for [**] if the Department of Environmental Management determines that such monitoring requirements and effluent limitations are needed to assure that State Water Quality standards are met in the receiving streams.

5. This permit may be modified, or alternately, revoked and reissued after public notice and opportunity for hearing to include Whole Effluent Toxicity (WET) limitations or to include limitations for specific toxicants if the results of the biomonitoring and/or the Toxicity Reduction Evaluation (TRE) study indicate that such limitations are necessary.

6. This permit may be modified or, alternatively, revoked and reissued after public notice and opportunity for hearing to incorporate additional requirements or limitations for specific toxicants if the required additional analyses in Part I.A. indicate that such additional requirements and/or limitations are necessary to assure that State Water Quality Standards are met in the receiving stream.

7. This permit may be modified, or alternately, revoked and reissued after public notice and opportunity for hearing to reflect any revisions to the variance for chloride made by the Water Pollution Control Board during the next revision of water quality standards or by EPA upon review of the variance.

D. SCHEDULE OF COMPLIANCE FOR MERCURY

1. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality (OWQ) six (6) months from the effective date of the permit. The progress report shall include, among other items, a description of the method(s) selected for meeting final requirements for mercury. The final effluent limitations for mercury are deferred for the term of this compliance schedule, unless the final effluent limitations can be met at an earlier date. The permittee shall notify the Compliance Evaluation Section of OWQ as soon as the final effluent limitations for mercury can be met. Upon receipt of such notification by OWQ, the final effluent limitations for mercury will become effective, but no later than thirty-six (36) months from the effective date of this permit. Monitoring and

reporting of influent and effluent mercury is required in accordance with Part I.A.3 and Part I.A.4 of the permit.

2. If construction is required, a construction permit application (including Plans and Specifications) for complying with final requirements shall be submitted (if required by 327 IAC 3-2) within fourteen (14) months from the effective date of the permit. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality at this time.

3. Initiation of construction, if necessary, shall commence not later than the twenty-three (23) months from the effective date of the permit. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality at this time.

4. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality thirty-two (32) months from the effective date of the permit.

5. Construction shall be completed within thirty-five (35) months from the effective date of the permit. The permittee shall submit a written progress report to the Compliance Evaluation Section, Office of Water Quality when construction has been completed.

6. The permittee shall comply with all final requirements no later than thirty-six (36) months from the effective date of the permit.

7. If the permittee fails to comply with any deadline contained in the foregoing schedule, the permittee shall, within fourteen (14) days following the missed deadline, submit a written notice of noncompliance to the Compliance Evaluation Section of the Office of Water Quality stating the cause of noncompliance, any remedial action taken or planned, and the probability of meeting the date fixed for compliance with final effluent limitations.

E. SCHEDULE OF COMPLIANCE – CHLORIDE VARIANCE

1. Beginning on the effective date of the permit modification incorporating the chloride variance, the permittee shall comply with the monthly average and daily maximum interim limitations for chloride in Part I.A.3., Table 4, and the Source Identification requirements in Part I.G.1 of the Chloride PMPP.

2. Within six (6) months of the effective date of the permit modification incorporating the chloride variance, the permittee shall comply with the Public Awareness Program requirements in Part I.G.2 and the Water Treatment Plants Process Optimization requirements in Part I.G.3 of the Chloride PMPP.

3. Within twelve (12) months (but no earlier than eleven (11) months) of the effective date of permit modification incorporating the chloride variance, the permittee shall submit the Chloride Variance Annual Report described in Part I.G.5 of the Chloride PMPP.

4. Within twenty-one (21) months from the effective date of the permit modification incorporating the chloride variance, the permittee shall comply with the Non – Residential Users Program requirements in Part I.G.4 of the Chloride PMPP.

5. Within twenty-four (24) months of the effective date of the permit modification incorporating the chloride variance, the permittee shall comply with the monthly average and daily maximum variance limitations for chloride in Part I.A.3., Table 4.

6. If the permittee fails to comply with any deadline contained in the foregoing schedule, the permittee shall, within fourteen (14) days following the missed deadline, submit a written notice of noncompliance to the Compliance Data Section of the Office of Water Quality stating the cause of noncompliance, any remedial action taken or planned, and the probability of meeting the date fixed for compliance with Chloride PMPP requirements and/or chloride variance limitations.

F. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The 1977 Clean Water Act explicitly states, in Section 101(3) that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited. In support of this policy the U.S. EPA in 1995 amended the 40 CFR 136.3 (Tables IA and II) by adding testing methods for measuring acute and short-term chronic toxicity of whole effluents and receiving waters. To adequately assess the character of the effluent, and the effects of the effluent on aquatic life, the permittee shall conduct Whole Effluent Toxicity Testing. Part 1 of this section describes the testing procedures, Part 2 describes the Toxicity Reduction Evaluation which is only required if the effluent demonstrates toxicity, as described in paragraph f.

1. Whole Effluent Toxicity Tests

Within four months of the effective date of the permit, the permittee shall conduct the series of bioassay tests described below to monitor the toxicity of the discharge from Outfall 001.

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G. CHLORIDE POLLUTANT MINIMIZATION PROGRAM PLAN (PMPP)

1. Source Identification

Beginning on the effective date of the permit modification incorporating the chloride variance, the City of Angola shall continue to update the mass balance of chloride sources identified in the April 22, 2010 variance application. The City of Angola shall continue to monitor at select locations within the collection system to further refine the mass balance of chloride sources. All monitoring information, including monitoring location, frequency and sampling results, shall be recorded and included in the Chloride Variance Annual Report outlined in Section V of this PMPP.

2. Public Awareness Program

Within six (6) months from the effective date of the permit modification incorporating the chloride variance, the City of Angola shall initiate a public awareness program for residents within the service area of the facility that describes the negative impacts of chloride from water softener waste discharged to the facility's collection system. The program shall explain that residential softening is not necessary as the City softens the water supply on a system wide basis, and emphasize the cost savings associated with bypassing the residential water softener.

a. The public awareness program shall utilize the following media:

(1) Flyers with monthly utility bills.

(2) Newspaper articles.

(3) City web site.

(4) Public meetings.

b. An overview of the public awareness program shall be included with the Chloride Variance Annual Report outlined in Section V of this PMPP.

3. Water Treatment Plants - Process Optimization

Within six (6) months from the effective date of the permit modification incorporating the chloride variance, the City of Angola shall initiate implementation of water treatment plant process optimization by addressing the recommendations referenced in the City's April 22, 2010 variance application.

a. Process optimization shall include both the Mill Street Water Treatment Plant and North Water Treatment Plant, and shall address, at a minimum:

(1) A review of regeneration practices, including regeneration intervals and salt dosage.

(2) Best management practices that focus on salt usage reduction.

(3) Evaluation of the practicability of a brine reclamation program.

(4) Good housekeeping measures that focus on preventing incidental releases of salt to the collection system (i.e., spills, storage practices, etc,).

(5) Other water softening efficiency measures intended to reduce the quantity of chloride discharged to the wastewater treatment plant.

b. An overview of the all water treatment plant process optimization practices shall be included with the Chloride Variance Annual Report outlined in Section V of this PMPP.

4. Non – Residential Users Program

Within twenty-one (21) months from the effective date of the permit modification incorporating the chloride variance, the City of Angola shall develop and implement a non – residential users program addressing chloride reductions from non – residential users. The non – residential users program shall consist of the following:

a. A voluntary program for industrial users emphasizing the following:

(1) Demand Initiated regeneration.

(2) Brine reclamation.

(3) (Softened) water conservation measures.

(4) Operation/process modifications.

(5) Good housekeeping measures.

b. A report evaluating the benefits of economic incentives for non – residential users to reduce the discharge of chloride to the City of Angola WWTP.

c. The report and an overview of the voluntary program shall be included with the Chloride Variance Annual Report outlined in Section V of this PMPP.

5. Chloride Variance Annual Report

The City of Angola shall prepare a Chloride Variance Annual Report. The initial report shall be submitted twelve (12) months from the effective date of the permit modification incorporating the chloride variance.

a. The reports shall include the following:

(1) The results of all influent and effluent chloride monitoring data accumulated during the past year.

(2) An updated mass balance of chloride sources to the WWTP.

(3) A collection system monitoring program for chloride, including:

(A) a compilation of the results of collection system monitoring for chloride for the previous 12 month period;

(B) a plan and schedule for continued collection system monitoring, including an identification of sampling points and sampling frequencies, and an updated mass balance of chloride sources.

(4) A report summarizing the implementation of the of the Public Awareness Program.

(5) A report summarizing process optimization practices implemented for the Mill Street Water Treatment Plant and North Water Treatment Plant backwash operations, and a plan and schedule for future process optimization procedures.

(6) A plan for a chloride monitoring program that measures the progress of chloride reductions from the water treatment plants and that identifies monitoring location and frequency.

(7) A plan for an industrial user monitoring program with an identification of monitoring locations for specific industrial users and a schedule for monitoring frequencies.

(8) A review of non-point source contributions of chloride to the WWTP, focusing on road deicing practices, ensuring that BMPs are in place to minimize chloride from road salt runoff from reaching the WWTP. Review should include consideration of the potential for liquid road salt, other de-icing product alternatives, a pre-wetting system, road temperature sensors, and enhanced staff training regarding road salt usage.

(9) A report on an investigation of treatment technologies, process changes, and other techniques which may result in further progress toward attainment of the WQBELs for chloride.

b. Subsequent reports shall include updates of all activities relevant to the chloride PMPP and shall be submitted on an annual basis coinciding with the date of the initial submittal.

c. The Chloride Variance Annual Report shall be submitted to the Municipal NPDES Permits Section at the address identified in Part II.D.2. of this permit.